

The Honorable James C. Owens
Acting Administrator
National Highway Traffic Safety Administration
Docket Management Facility M-30
1200 New Jersey Avenue, S.E.
West Building, Ground Floor, Room W12-140
Washington, DC 20590

Re: Advanced Notice of Proposed Rulemaking, Docket No. NHTSA-2018-0021,
Federal Motor Vehicle Safety Standard No. 111, Rear Visibility

Dear Mr. Owens:

Harley-Davidson Motor Company is pleased to provide the following comments on the above-referenced Advanced Notice of Proposed Rulemaking (ANPRM), regarding NHTSA's request for public comments to Federal Motor Vehicle Safety Standards (FMVSS) No. 111, *Rear Visibility*. The ANPRM proposes to permit camera-based rear visibility systems, commonly referred to as "Camera Monitor Systems" (CMS), as an alternative or supplement to inside and outside rearview mirrors on light-duty and heavy-duty vehicles. Harley-Davidson believes these potential amendments to FMVSS No. 111 should not be limited to passenger vehicles and commercial vehicles, but should also extend to two- and three-wheeled motorcycles.

CMS has several advantages over traditional motorcycle equipped mirrors. Conventional motorcycle mirror mounting locations are limited by the width of the handlebars and the narrow width of the vehicle. As a result of these geometric limitations, the field of view from motorcycle mirrors can be smaller than that of other vehicles. Motorcycle riders adjust their mirrors considering both rear and side field of view. Depending on the rider's body type and use of protective clothing, a portion of the mirrors' field of view may be blocked. The Motorcycle Safety Foundation's Basic Rider Course Rider Handbook (Rider Handbook) includes training on blind spots and techniques to compensate for this. *See Rider Handbook, Section 8, Strategies for Common Riding Situations, p. 27.* CMS on a motorcycle can provide an improved level of rearward visibility and reduce the rider's blind spot by providing a wider and unobstructed field of view. This wider and unobstructed view is particularly beneficial when riding in groups, as the reduction of blind spots improves the rider's ability to see smaller sized motorcycles.

The Agency noted that mirrors offer drivers the ability to modify their field of view rapidly by looking at the mirror from different angles, while a CMS view is fixed. On a motorcycle with conventional mirrors, however, as the riding position/posture changes the overall field of view may become limited. A motorcycle CMS with a wide field of view would be similar to a convex mirror and would provide the rider a rear and/or side view at all times and at whatever riding position they may be in, consequently increasing the rider's level of situational awareness. In comparison to mirrors, the wider field of view offered by the CMS would reduce the need for the rider to move his/her body and/or vehicle in order to improve visibility, thus reducing potential distraction and providing an increased level of safety for the rider and other motorists.

The Agency has requested comments on whether and how placing the CMS display in a non-traditional location (e.g., in the center console) would affect vehicle safety, as compared to placing the display close to where the outside rearview mirrors would typically be mounted near the A-pillars. Harley-Davidson requests that any future CMS regulations take into consideration the unique configuration of motorcycles, which do not have A-pillars. Moreover, mirrors on motorcycles are typically much smaller than light and heavy-duty vehicles due to limitations of practical mounting locations (typically on the handlebar or at the edge of the fairing) and the general overall size of the vehicle. Providing a CMS display in the center of the fairing offers two distinct advantages for a motorcycle. The first is in the size: a center-mounted CMS display could be larger than the traditional standard mirrors, aiding in rear and/or side visibility. Second, unlike light- and heavy-duty vehicles, a center-mounted display on a motorcycle would not require a “sideways” glance.

The Agency tentatively concluded that it may not be technically possible at this time to combine CMS with the camera or display for backup systems. Harley-Davidson believes that, even if separate cameras may be necessary to support the two functions, the smaller size of motorcycles and trikes allows for more effective integration on these vehicles than on light or heavy-duty vehicles.

As the Agency has acknowledged, CMS requirements and procedures have been incorporated into the most recent update to the United Nations Economic Commission for Europe’s (UNECE) Regulation No. 46, which has already been adopted in a number of countries in Europe and Asia. We note that Regulation No. 46 includes L-Category Motorcycles.

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Harley-Davidson requests that the Agency consider the inclusion of motorcycles in future regulations regarding CMS and rear visibility. We believe a CMS installed on a motorcycle meets and/or exceeds the current level of safety provided by traditional mirrors.

Harley-Davidson Motor Company appreciates the opportunity to comment on this ANPRM. If the Agency has any questions or if we can provide additional information to assist the Agency in its consideration of this proposal, please feel free to contact me at (414) 465-6434.

Best Regards,



Michael R. Medina
Manager, Motorcycle Regulatory Compliance – Safety
Harley-Davidson Motor Company